October 21, 1948.

Mr. Harold P. Klein,
Department of Bacteriology,
University of California.

Dear Mr. Klein,

I received your letter just after I had posted a message to Dr. Doudoroff about some of the work you're interested in. In response to your request, you have been sent reprints of the relevant publications. If you have not already done so, I would suggest that you also read Beadle's review article, "Biochemical Genetics" which appeared in Chemical Reviews in 1945 and Tatum's paper in the 1946 Cold Spring Harbor Symposium, which also contains several other relevant papers.

As to additional methods, I will be glad to answer any specific inquiries. Most of the fermentation mutants have been obtained by spreading 10^8 or so cells on Eosin-Methylene Blue agar containing 1% carbohydrate, and irradiating the plates directly with UV longenough to leave about 400 survivors. In general, about 1 in a thousand or five-thousand colonies will be a mutant or have a mutant sector, and can be seen as such directly. EMB is the preferred medium for purification and gross testing of the mutants. You might find it worthwhile to use triphenyltetrazolium chloride instead. Using .05% "TZ" in nutrient agar with 1% added carbohydrate, the mutants will be bright red, and if things go weal, the non-mutants will be neutral. This medium is a little trickier than EMB, however. For biochemical mutants, we have developed a new "concentration" method using penicillin. This has been sent to JBC, but if you expect to be producing new biochemical mutants very soon, I'll send you the details directly.

With best regards,

Yours sincerely,

Joshua Lederberg
Assistant Professor of Genetics.